



Types of Coliform Violations for Group A Public Water Systems

Coliform Testing

All public water systems in Washington State must be tested for coliform bacteria on a regular basis. The number of samples required depends on the population served by the system.

If a sample is submitted and testing shows that there are no coliform bacteria present, it is considered to be *satisfactory*. If any coliform bacteria are present, the sample is considered *unsatisfactory*. If unsatisfactory, the sample will be further tested for either *E. coli* or fecal coliform bacteria.

The presence of coliform in drinking water is an indicator that the water may be contaminated and could possibly cause illness to those who drink it. The presence of *E. coli* or fecal coliform indicates a greater likelihood that disease-causing organisms may be present and there is a greater public health concern.

Standards called Maximum Contaminant Levels (MCLs) have been set for the presence of *E. coli*, fecal coliform, and total coliform bacteria. The MCL is the maximum permissible level of coliform in drinking water. A water system has a *violation* if it exceeds the standard. The two types of MCL violations are *acute* and *non-acute*.

Acute MCL Violation

The acute MCL is the standard for the presence of *E. coli* and fecal coliform bacteria in drinking water. *E. coli* and fecal coliform are more closely related to recent contamination by sewage or animal waste than other types of coliform bacteria.

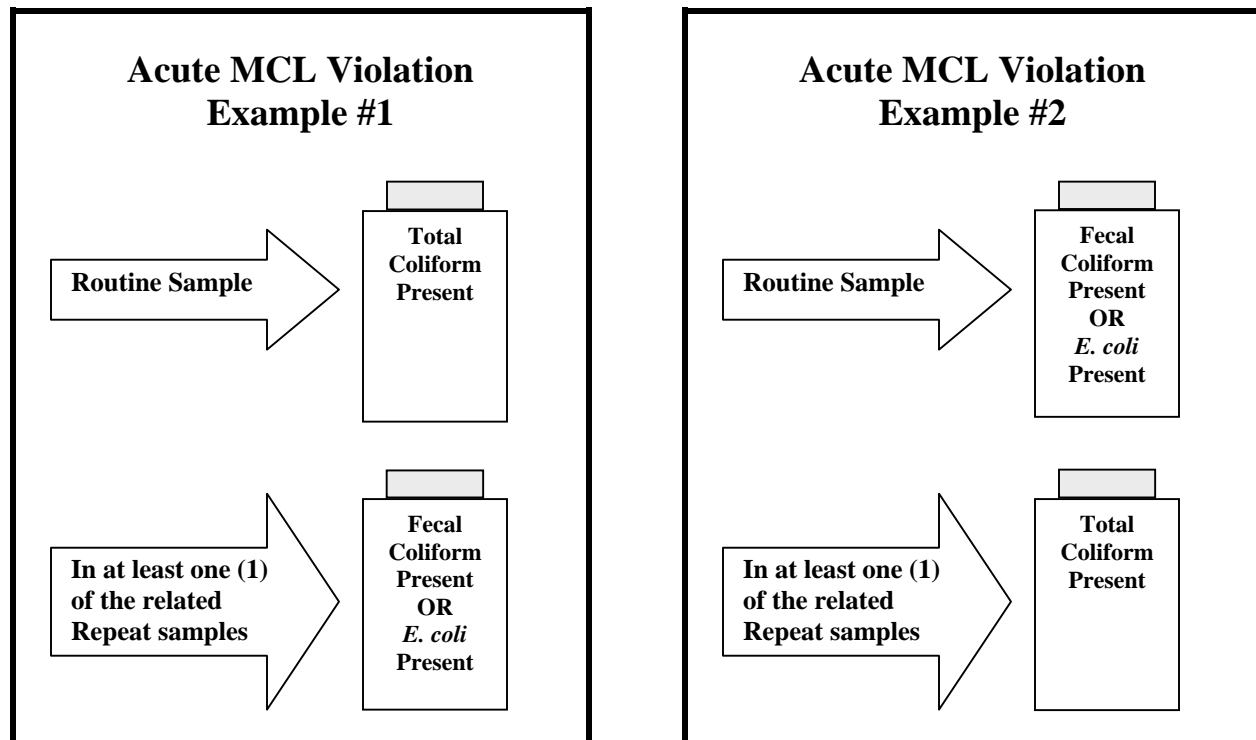
A single sample with a coliform presence, an *E. coli* presence, or a fecal coliform presence does not result in an acute MCL violation. *The acute MCL violation is determined based on the results of both the routine sample and the related set of repeat samples collected as follow-up to the unsatisfactory routine sample.*

For an acute MCL violation to occur, a sample and at least one *related* repeat sample must both have coliform bacteria present, and one of the samples must show the presence of *E. coli* or fecal coliform bacteria. If this occurs, contamination is confirmed in the water supply.



HELPING TO ENSURE SAFE AND RELIABLE DRINKING WATER

The following shows how an acute MCL violation could occur:



Non-Acute MCL Violation

The non-acute MCL is the standard for the presence of total coliform bacteria. The presence of total coliform bacteria in a water sample generally indicates contamination from the environment (soils, plants, etc.), but there is still a possibility that the water could contain disease-causing organisms.

Non-acute MCL violations are calculated on a monthly basis. As with acute MCL violations, a single sample with a coliform presence does not result in a non-acute MCL violation. *All routine and repeat samples collected for a specific month count towards determining compliance.*

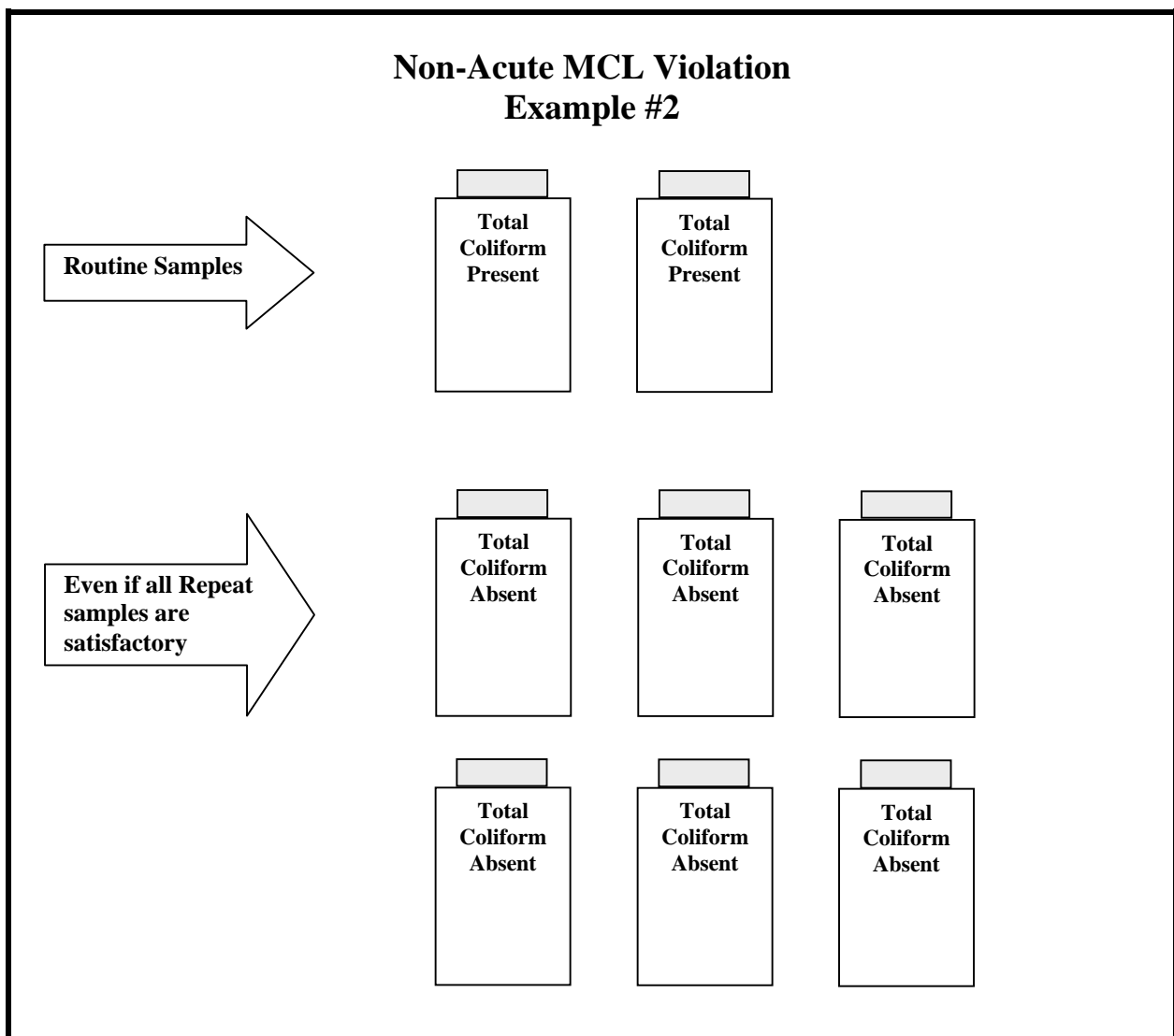
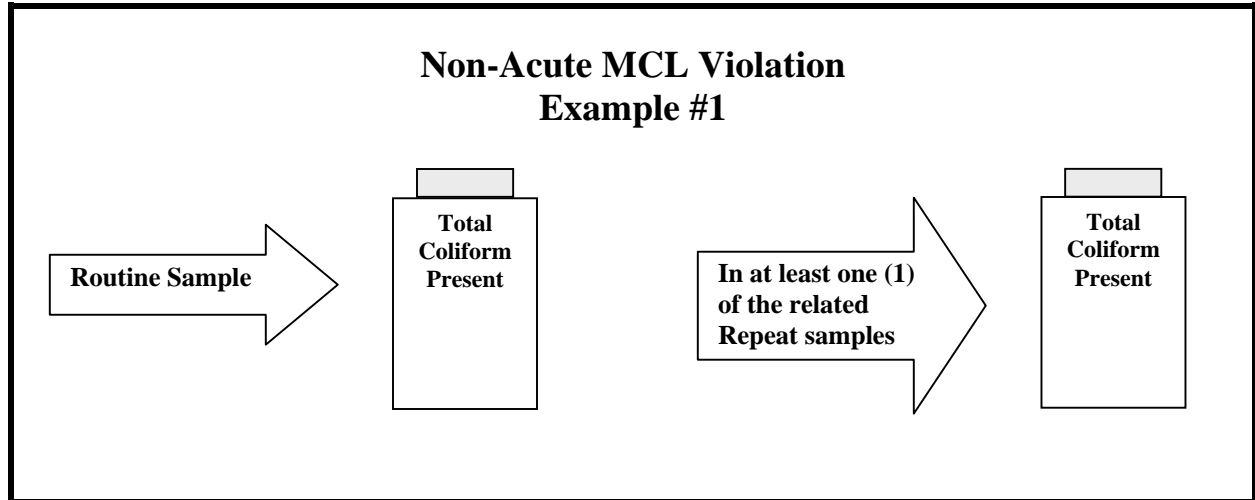
For a system that collects less than 40 routine samples during the month:

- The system has a non-acute MCL violation if two or more samples of any type (routine and/or repeat) are unsatisfactory with coliform present.

For a system that collects 40 or more routine samples during the month:

- The system has a non-acute MCL violation if more than 5.0 percent of all routine and repeat samples are unsatisfactory with coliform present.

The following shows how a non-acute MCL violation could occur:



What to do if you have an MCL violation:

If you have an MCL violation, contact your DOH regional office as soon as possible to discuss public notification, follow-up requirements, and steps you can take to resolve the problem quickly. *There are requirements to notify everyone served by the water system:*

- Acute MCL violation – public notification is required within 24 hours. A boil water advisory will almost always be issued in response to an acute MCL violation because of the concern for public health.
- Non-acute MCL violation – public notification is required to be completed within 30 days, however it is recommended that it be completed within 14 days.

Notification forms are available from DOH.

Other Types of Coliform Violations

There are two other types of coliform violations that are related to monitoring requirements for the water system:

Major Repeat Violation

This type of violation occurs if a system has an unsatisfactory routine sample(s) and no repeat samples are collected. This is considered a water quality violation since the routine sample showed the presence of bacteria. *Public notification is required.* Notification forms are available from DOH.

Major Monitoring Violation

This type of violation occurs if a system does not collect any samples during a month that one or more are required. Monitoring is important to assure that the water served to customers is free of coliform bacteria. *Public notification is required.* Notification forms are available from DOH.

Significant Non-Compliance (SNC) with Coliform Requirements

DOH classifies violations as either water quality or monitoring violations, and identifies a water system as a *SNC* if the system has the following violations within a 12-month period:

- Four water quality violations (MCL and/or major repeat); or
- Six major monitoring violations; or
- A combined total of six water quality and monitoring violations.

When a water system becomes a SNC, the department will pursue enforcement.

For more information:

Northwest Regional Office – Kent

Coliform Program: 253-395-6775

Main Office: 253-395-6750

Southwest Regional Office – Olympia

Coliform Program: 360-753-5090

Main Office: 360-664-0768

Eastern Regional Office – Spokane

Coliform Program: 509-456-2788

Main Office: 509-456-3115

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